

Please type a plus sign (+) inside this box

+

PTO/SB/01 (12-97)

Approved for use through 9/30/00.OMB 0651-0032

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION</b> <b>(37 CFR 1.63)</b>  <input type="checkbox"/> Declaration Submitted with Initial Filing      OR <input checked="" type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16(e)) required)	Attorney Docket Number	20434-718
	First Named Inventor	Islam
	<b>COMPLETE IF KNOWN</b>	
	Application Number	09/550,730
	Filing Date	April 17, 2000
	Group Art Unit	2874
Examiner Name	Not assigned	

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**BROADBAND SAGNAC RAMAN AMPLIFIERS AND CASCADE LASERS**

(Title of the Invention)

the specification of which

☐ is attached hereto  
OR

☒ was filed on (MM/DD/YYYY)

04/17/2000

as United States Application Number or PCT International

Application Number 09/550,730 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
			<input type="checkbox"/>	YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/028 attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(h) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	
		<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/028 attached hereto.

(Page 1 of 2)

Burden Hour Statement: This form is estimated to take 0.4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

Please Type a plus sign (+) inside this box



PTO/SB/01 (12-97)

Approved for use through 9/30/00.OMB 0651-0032

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## DECLARATION — Utility or Design Patent Application

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of the application is not designated in the prior United States or PCT international application in the manner provided by the first paragraph of 31 U.S.C. 112. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)
09/110,696 08/773,482	07/07/98 12/23/96	

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/028 attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: ☒ Customer Number 021971

OR

☒ Registered practitioner(s) name/registration number listed below

Place Customer  
Number Bar  
Code Label here

Name	Registration Number	Name	Registration Number
Paul Davis	29,294	David Weitz	38,362
John Bruckner	35,816	Barbara Courtney	42,442
Richard Gregory	42,607	Van Mahamedi	42,828
Shaleish Mehra	44,834	Stephen Warhola	43,237

☒ Additional registered practitioner(s) named on supplemental Registered Practitioner Information sheet PTO/SB/02C attached hereto.

Direct all correspondence to: ☐ Customer Number or Bar Code Label ☒ Correspondence address below

Name	Paul Davis				
Address	Wilson Sonsini Goodrich & Rosati				
Address	650 Page Mill Road				
City	Palo Alto	State	CA	ZIP	94304
Country	U.S.	Telephone	650-493-9300	Fax	650-493-6811

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor:		<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name (first and middle (if any))			Family Name or Surname		
Mohammed N.			Islam		
Inventor's Signature					Date
Residence: City	Allen	State	TX	Country	US
Post Office Address	907 Twin Creeks Drive				
Post Office Address					
City	Allen	State	TX	ZIP	75013
				Country	US

☐ Additional inventors are being named on the \_\_\_\_\_ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto:

**POWER OF ATTORNEY BY ASSIGNEE TO EXCLUSION OF INVENTOR**  
**UNDER 37 C.F.R. § 3.71 WITH REVOCATION OF PRIOR POWERS**

The undersigned ASSIGNEE of the entire interest in:

- ☐ U.S. Patent No. \_\_\_\_\_  
☒ U.S. application no. 09/550,730, filed on April 17, 2000

hereby appoints the following attorneys of Wilson Sonsini Goodrich & Rosati:

Attorney Name	Reg. No.	Attorney Name	Reg. No.
Paul Davis	29,294	John J. Bruckner	35,816
David J. Abraham	39,554	David J. Weitz	38,362
George A. Willman	41,378	U.P. Peter Eng	39,666
Jinntung Su	42,174	Barbara J. Courtney	42,442
Richard L. Gregory	42,607	Van Mahamedi	42,828
Stephen Warhola	43,237	Chen, Shirley	44,608
Shaliesh Mehra	44,934		

and all Wilson Sonsini Goodrich & Rosati attorneys registered to practice before the United States Patent and Trademark Office, to prosecute this application and transact all business in the United States Patent and Trademark Office in connection therewith and hereby revokes all prior powers of attorney; said appointment to be to the exclusion of the inventors and the inventors' attorneys in accordance with the provisions of 37 C.F.R. § 3.71.

The following evidentiary documents establish a chain of title from the original owner to the Assignee:

*(complete one of the following)*


- ☒ a copy of an Assignment attached hereto, which Assignment has been (or is herewith) forwarded to the Patent and Trademark Office for recording; or
- ☐ the Assignment recorded on \_\_\_\_ at reel \_\_\_\_, frames \_\_\_\_-\_\_\_\_.

Pursuant to 37 C.F.R. § 3.73(b) the undersigned Assignee hereby states that evidentiary documents have been reviewed and hereby certifies that, to the best of ASSIGNEE's knowledge and belief, title is in the identified ASSIGNEE.

Direct all correspondence and telephone calls to:

Name	Paul Davis				
Address	Wilson Sonsini Goodrich and Rosati				
Address	650 Page Mill Road				
City	Palo Alto	State	CA	Zip	94304
Country	USA	Telephone	(650) 493-9300	Fax	(650) 493-6811

ASSIGNEE: XTERA COMMUNICATIONS, INC.

Name:   
 Mohammed Islam, Chairman

Date: 7/25/00

1003394-149  
 1003394-149

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

ASSIGNMENT OF APPLICATION

Docket Number 20434-718

Whereas, the undersigned:

1. ISLAM, Mohammed N.  
907 Twin Creeks Drive  
Allen, TX 75013

hereinafter termed "Inventors", have invented certain new and useful improvements in

**BROADBAND SAGNAC RAMAN AMPLIFIERS AND CASCADE LASERS**

- ☒ for which an application for United States Patent was filed on April 17, 2000, Application No. 09/550,730  
☐ for which an application for a United States Patent was executed on \_\_\_\_\_, and

WHEREAS, Xtera Communications, Inc., a corporation, having a place of business at 5800 Granite Parkway, Suite 300, Plano, TX 75024, (hereinafter termed "Assignee"), is desirous of acquiring the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventors to have been received in full from said Assignee:

1. Said Inventors do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.

2. Said Inventors hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventors shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventors in providing such cooperation shall be paid for by said Assignee.

3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventors, their respective heirs, legal representatives and assigns.

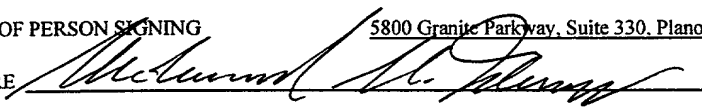
4. Said Inventors hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below:

Date: 7/25/00

  
Mohammed ISLAM

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>STATEMENT CLAIMING SMALL ENTITY STATUS</b> <b>(37 CFR 1.9(f) &amp; 1.27(c)) – SMALL BUSINESS CONCERN</b>		<b>Docket Number (Optional)</b> 20434-718
<b>Applicant, Patentee, or Identifier:</b>	Mohammed Islam	
<b>Application or Patent No.:</b>	09/550,730	
<b>Filed or Issued:</b>	April 17, 2000	
<b>Title:</b>	BROADBAND SAGNAC RAMAN AMPLIFIERS AND CASCADE LASERS	
I hereby state that I am <input type="checkbox"/> the owner of the small business concern identified below <input checked="" type="checkbox"/> an official of the small business concern empowered to act on behalf of the concern identified below		
<b>NAME OF SMALL BUSINESS CONCERN</b>	XTERA COMMUNICATIONS, INC.	
<b>ADDRESS OF SMALL BUSINESS CONCERN</b>	5800 Granite Parkway, Suite 330, Plano, TX 75024	
<p>I hereby state that the above identified small business concern qualifies as a small business concern as defined in 13 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.</p> <p>I hereby state that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:</p> <p><input type="checkbox"/> the specification filed herewith with title as listed above  <input checked="" type="checkbox"/> the application identified above  <input type="checkbox"/> the patent identified above</p> <p>If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate statements as to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).</p> <p>Each person, concern, or organization having any rights in the invention is listed below:</p> <p><input checked="" type="checkbox"/> no such person, concern, or organization exists  <input type="checkbox"/> each such person, concern, or organization is listed below.</p>		
<b>NAME OF SMALL BUSINESS CONCERN</b>		
<b>ADDRESS OF SMALL BUSINESS CONCERN</b>		
<p>Separate statements are required from each named person, concern or organization having rights to the invention stating their status as small entities (37 CFR 1.27).</p> <p>I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate (37 CFR 1.28(b)).</p>		
<b>NAME OF PERSON SIGNING</b>	<u>Mohammed Islam</u>	
<b>TITLE OF PERSON IF OTHER THAN OWNER</b>	<u>Chairman</u>	
<b>ADDRESS OF PERSON SIGNING</b>	<u>5800 Granite Parkway, Suite 330, Plano, TX 75024</u>	
<b>SIGNATURE</b>		<b>DATE</b> <u>7/25/00</u>

**Burden Hour Statement:** This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

1-31-92

## PATENTS ONLY

Patent and Trademark Office

To the Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  Mohammed Islam Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		2. Name and address of receiving party(ies):  Name: Xtera Communications, Inc.  Street Address: 5800 Granite Parkway  Suite 300  City/State/Zip: Plano, TX 75024 Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Nature of conveyance:  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other  Execution Date: <u>07/25/2000</u>			
4. Application number(s) or patent number(s): 09/550,730 If this document is being filed together with a new application, the execution date of the application is:			
A. Patent Application No.(s): 09/550,730		B. Patent No.(s):	
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Name and address of party to whom correspondence concerning document should be mailed:  Name: Paul Davis Internal Address: FH 1-2 Wilson Sonsini Goodrich & Rosati 650 Page Mill Road Palo Alto, CA 94304-1050		6. Total number of applications and patents involved: [1]  7. Total fee (37 CFR 3.41) .....\$40.00 <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account  8. Deposit account number: <u>23-2415</u> (Attorney Docket No.: 24034-718)	

DO NOT USE THIS SPACE

9. Statement and signature.  
*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Paul Davis, Reg No. 29,294

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments, and document: [2]

## ASSIGNMENT OF APPLICATION

Docket Number 20434-718

Whereas, the undersigned:

1. ISLAM, Mohammed N.  
907 Twin Creeks Drive  
Allen, TX 75013

hereinafter termed "Inventors", have invented certain new and useful improvements in

**BROADBAND SAGNAC RAMAN AMPLIFIERS AND CASCADE LASERS**

- ☒ for which an application for United States Patent was filed on April 17, 2000, Application No. 09/550,730  
☐ for which an application for a United States Patent was executed on \_\_\_\_\_, and

WHEREAS, Xtera Communications, Inc., a corporation, having a place of business at 5800 Granite Parkway, Suite 300, Plano, TX 75024, (hereinafter termed "Assignee"), is desirous of acquiring the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventors to have been received in full from said Assignee:

1. Said Inventors do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.

2. Said Inventors hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventors shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventors in providing such cooperation shall be paid for by said Assignee.

3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventors, their respective heirs, legal representatives and assigns.

4. Said Inventors hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below:

Date: \_\_\_\_\_

7/25/00
  
 Mohammed ISLAM